

## CLAIMS

What is claimed is:

1. A wireless communication apparatus, that communicates with a base station, comprising:
  - an adaptive antenna;
  - a receiving portion for receiving a control signal, to control directivity of said adaptive antenna, transmitted from said base station; and
  - a control portion for controlling the directivity of said adaptive antenna to be a beam steering or a null steering based on the control signal.
2. The wireless communication apparatus according to claim 1, wherein said control portion controls the directivity of said adaptive antenna by changing weighting of the beam steering and the null steering of said adaptive antenna.
3. The wireless communication apparatus according to claim 1, wherein said control portion controls the directivity of said adaptive antenna every frequency used by said wireless communication apparatus.
4. The wireless communication apparatus according to claim 1, further comprising:
  - a receiving quality monitoring portion for monitoring quality of a signal from said base station; and

a quality information transmitting portion for transmitting information about quality of a receiving signal monitored by said receiving quality monitoring portion to said base station,

wherein said control portion controls the directivity of said adaptive antenna based on the control signal which said base station calculates based on the quality information.

5. The wireless communication apparatus according to claim 1, wherein said control portion controls the directivity of said adaptive antenna based on the control signal which said base station produces according to the number of wireless communication apparatuses connected to said base station.

6. The wireless communication apparatus according to claim 1, wherein said control portion controls the directivity of said adaptive antenna based on the control signal which said base station produces according to the amount of communication in said base station.

7. The wireless communication apparatus according to claim 1, comprising:

a battery remaining amount detection portion for detecting a remaining amount of a battery powering said wireless communication apparatus, wherein said control portion stops the control of the directivity of said adaptive antenna based on a result of comparison between a predetermined

threshold value and the remaining amount of said battery detected by said battery remaining amount detection portion.